

REMARKS:

Applicants, their principal representatives in Germany, and the undersigned have carefully reviewed the first Office Action of July 22, 2009 in the subject U.S. patent application, in which the time for response is being extended for one month or until November 22, 2009, together with the prior art cited and relied on in the rejections of the claims. In response, the Substitute Specification, drawings and claims have been amended. It is believed that the claims which are now pending in the subject U.S. patent application are patentable over the prior art cited and relied on, taken either singly or in combination. Reexamination and reconsideration of the application and allowance of the claims is respectfully requested.

As set forth in the Substitute Specification, as depicted in the drawings and as recited in the currently pending claims, the subject invention is directed to a device for transporting reels of materials. As is well-known in the art, typical web-processing machines, generally at 06 in Fig. 1, and which are predominately web-fed rotary printing presses, are supplied with a web of material that is to be printed by its passage through one or more printing couples 07. Each web of material is supplied by a reel changer, generally at 09. As can be seen in Fig. 5, such a reel changer 09 supports an active web of material, from which the web being fed through the web-processing machine. The reel changer also typically supports a new reel of material that has been prepared for a flying web changer. Where the active reel of material starts to become depleted, the web from the depleting reel is spliced to the web of the new reel and production of the printing press continues uninterrupted.

Each web-processing machine 06 uses a plurality of reels of material in the course of a day's production of, for example, a daily newspaper. A large supply of suitable reels of paper must thus be kept readily available. The web-processing machine may well be used to print on different types of paper webs during a day's production. For example, the web-processing machine 06 may also be used to print multi-colored advertising inserts, weekend feature magazines and the like. These often use different types of material webs than are used to print the daily newspaper. Again, a large supply of various reels of material may be kept on hand.

A main storage area 02 is provided. However, it may be somewhat remote from the web-processing machine and typically is a large warehouse that receives a variety of types and sizes of reels of web materials. A control center for the web-processing machine, as depicted schematically at 26 in Fig. 4, can be provided with data regarding the upcoming production run which the press or web-processing machine 06 will be accomplishing. Using that data, the proper web reels can be taken from the main storage area 02. These web reels 01 are transported to a reel receiver 04. From there, they are moved to a reel unpacking station 03, where a typical protective overwrap is removed. At the same location, a splice preparation is done so that the reels of material can be used in the reel changer to perform a flying web splice.

As may be seen in Fig. 1, the reels of material are positioned on primary transport carriages once they have been unwrapped and prepared for the flying web splice. Since the splice material, which is typically an adhesive tape, has a finite life, only a certain number of reels of material can be prepared in advance. In accordance

with the present invention, these reels of materials are transported to an intermediate reel storage area, such as the one depicted at 13 in Fig. 1. The intermediate reel storage area 13 is provided with one or more secondary transport carriages 32. Each one of these is adapted to receive and to transport one or more of the primary transport carriages 27. This piggyback arrangement of one or more primary transport carriages 27 on each secondary transport carriage 32 is shown most clearly in Figs. 5-7. The use of this arrangement of primary transport carriages supported on, and moved by secondary transport carriages means that the individual reels of material 01 will be handled only once from the time they are prepared at the unwrapping and splice preparation location until they are delivered to the reel changer 09.

The secondary transport carriages 32 are confined to move along a transport route, generally at 12 in Fig. 1. This route is an extension of the longitudinal direction along which the web will travel as it is fed from the reel stand 09, through the printing couples 07 and on through the rest of the web processing machine. This transport path is directly aligned with, or is parallel to the longitudinal path of web travel. As a result, the secondary transport carriages 32 do not have to be rotated during their path of travel from the intermediate reel storage area 11 to the reel changer 09.

The intermediate reel storage area 11 has a plurality of reel storage spaces that are located adjacent to each other along the transport route. A number of such reel storage spaces are depicted at 13 in Fig. 1. Each such reel storage space is configured to receive at least one and preferably two of the primary transport carriages 27. This means that two reels of material 01, which have been prepared with splices 15, can be

positioned or stored in at least several of the longitudinally aligned storage spaces 13. The Examiner's attention is directed to paragraph 045 of the Substitute Specification for a discussion of this aspect of the present invention.

When a particular reel of material 01 is required by the web-processing machine, as determined by the control center 26, the secondary transport carriage is dispatched along the transport route 12 in the intermediate reel storage area 11 until it is adjacent one of the reel storage spaces 13. The reel 01 which is stored in that storage space 13, or which is one of the two such reels stored in that storage space, and its primary transport carriage 27, is moved onto the secondary transport carriage 32. The secondary transport carriage 32 then moves the selected reel of material 01 from its one of the plurality of storage spaces 13 to the reel changer 09. There, it is loaded onto the reel changer after an exhausted reel, as may be seen at the left in Fig. 5 has been removed and placed on another primary transport carriage. The secondary transport carriage can then return the used reel of material either to the storage area or to a transport route 14 which will take the used reel and its primary transport carriage away from the reel storage area 13.

In the first Office Action on the merits of July 22, 2009, claims 90, 94, 96, 102-106, 108, 111-117, 124, 125, 127, 128, 136-140 and 157-167 were withdrawn from consideration. In the current Amendment, these claims have been maintained as withdrawn but have not been cancelled. Upon allowance of generic claim 89, it is believed that these claims can then be rejoined to the currently pending claim. In anticipation of such rejoinder, the language of various ones of the withdrawn claims has

been amended to conform it to the language of the pending claims from which these withdrawn claims depend.

The Information Disclosure Statement (IDS) was objected to as allegedly failing to comply with 37 C.F.R. 1.97 and 1.98 and with MPEP Section 609. It was asserted that the non-patent literature document was not considered because it is not in English. The Examiner's attention is directed to MPEP 609 04(a) and specifically to section III which is entitled "Concise Explanation of Relevance for Non-English Language Information". It is set forth in that section that "each information disclosure statement must further include a concise explanation of the relevance as it is presently understood by the individual designated in 37 C.F.R. 1.56(c) most knowledgeable about the content of the information listed that is not in the English language. The concise explanation may be either separate from the specification or part of the specification." (Emphasis original). In the IDS filed with the application, it was stated that the non-English language document is discussed in the specification of the application. Since the specification was prepared by, or at the request of, the applicants and their representatives, the discussion of this non-English language document in the specification complies with the requirements of 37 C.F.R. 1.97 and 1.98. The Examiner is requested to acknowledge his consideration of this material.

The drawings were objected to because reference numeral 18 in Fig. 8 did not have a lead line. That lead line has been added in the concurrently submitted replacement sheet of drawings. The drawings were also objected to because the reference numeral 4a, also in Fig. 8, was not mentioned in the specification. That

reference numeral has been changed to 4 in replacement Fig. 8. It is believed that the inclusion of this replacement sheet of drawings overcomes the objections to the drawings.

The Substitute Specification was objected to because of the existence of a typographical error in paragraph 041. That error has been corrected. Several other minor errors noted by the undersigned during the review of the Substitute Specification have also been corrected. These corrections do not constitute any new matter.

Claims 107 and 141-146 were rejected under 35 U.S.C. 112, second paragraph as being indefinite. In response, claim 107 has been cancelled. Claim 141 has been amended to depend from currently pending independent claim 89. Claim 142 has been cancelled. Claims 143-146 now depend from claims that are believed not to be indefinite.

Claims 89, 91, 93, 95, 97-101, 107, 109, 118-121, 123, 126, 129-135, 141-146 and 148-156 were rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,138,938 to Lehrieder in view of U.S. Published Patent Application No. 2003/0164102 to Schaede. That application has issued as U.S. Patent No. 7,040,231. Further discussion of that secondary reference will be made referring to the issued patent. Claims 92, 122 and 147 were rejected as being unpatentable over Lehrieder in view of Schaede and further in view of U.S. Published Patent Application No. 2004/0091340 to Allemann.

Referring initially to the primary reference to Lehrieder, U.S. Patent No. 6,138,938, a complete reading of this document makes it quite clear that the

characterization of it in the Office Action is inaccurate at best. The prior art Lehrieder device is a prior invention by one of the same inventors as are responsible for the present invention. In the prior Lehrieder device there are required the use of four different transport carriages to move each roll of paper from the supply location to the roll changer. In contrast, in the subject invention, as recited even more clearly in currently amended independent claim 89, there are required only two such transport carriages. In the prior Lehrieder device, two of the four carriages move in the longitudinal direction of the web processing device while two move in a direction that is perpendicular to the web transport direction. The analysis that is set forth in the Office Action, at the bottom of page 4 thereof and continuing at the top of page 5, is the result of a selection process which ignores half of the structural aspects of the prior device.

As may be seen in Fig. 1 of the prior Lehrieder reference, rolls of material are taken from a storage area 3 and are transported by a forklift truck 4 to a first conveyor 6. The rolls are then directed to a first and second unpacking stations 8 and 9. Once the rolls 1 have been unpacked, they are moved from transfer stations 13, 14 to individual first transport cars 16. These first transport cars 16 initially stand on turntables 23 which are rotatable by 90°. Each first transport car 16 is then directed to a preparation station 26 where the roll of material it supports is prepared for a roll change.

The prepared roll is put back on the first transport car 16 which is loaded onto a second transport car 27. This second transport car 27 it's itself provided with a turntable. It moves in a direction which is parallel to a longitudinal direction of a web transport through a web-processing machine, which is not specifically shown.

The second transport car 27 uses its turntable to rotate each roll of paper 1, as it moves generally parallel to the longitudinal direction of the web-processing machine. Each of the primary transport carts 16, which have been carried by one of the second transport carts 27 is then unloaded into one of a plurality of rows 31, 32, 33, 34, 36, 37, 38 that are part of an intermediate storage facility 39. This motion is in a direction that is perpendicular to the longitudinal direction of web travel in the non-depicted web processing machine.

A third transport cart 41 rides along a third car track which is parallel to the longitudinal direction of web travel. Each of the primary carts 16 now can move, in a direction that is perpendicular to the longitudinal direction of web travel, out of the respective rows 31, 32, 33, 34, 36, 37, 38 in the intermediate storage area 39. The third transport carts 41 moves along a row of roll changers 2. Once the third cart 41 is adjacent a selected one of the plurality of roll changers, it now moves onto tracks 46 and 47 that extend perpendicular to the longitudinal direction of web travel. These tracks can be seen most clearly in Fig. 3.

The prepared rolls 24, which are still being supported by the primary cars 16, and which are being moved by the third transport carts 41 in a direction perpendicular to the longitudinal web travel direction, are now again moved perpendicular to that direction onto yet a fourth cart 54. This fourth transport cart 54 itself does move in the longitudinal direction of web travel and moves the prepared rolls 24 on their supporting primary transport carts 16 into a position where the prepared rolls 24 can be grasped by the roll changer.

In the discussion of the Lehrieder prior art reference in the Office Action, it is correctly stated that there is a storage area 39 with a plurality of storage spaces 31, 32, 33, etc. A primary transport carriage 16 does support rolls of material while they are being deposited in those storage spaces. A transport route of a third transport car 41 does extend in a longitudinal direction of the web processing device. However, the primary transport carts do not move from the third transport car 41 to the reel changer 2. Instead, they move in a direction that is transverse to the longitudinal direction of the web of material, while being supported by the third transport car 41. After that, the rolls of material are again moved in a direction of web travel on the fourth transport car 54. The analysis in the Office Action thus "conveniently" fails to mention approximately half of the steps that the rolls of material have to go through from the roll storage area to the reel changer.

The secondary reference to Schaede is of only very general interest to the subject invention. It shows a web processing machine in which a single reel changer and a web-processing machine are in alignment. Such an arrangement is generally well-known. Other than that, the Schaede reference has little to add to the teachings of the prior art Lehrieder patent.

Claim 89 has been amended to more clearly define the subject invention over the prior art cited and relied on in the rejection. As amended, claim 89 recites that there is a transport route for the primary transport carriage from the reel storage area to the reel changer in the web processing machine and being parallel with the longitudinal direction of web travel through the web-processing machine. In the prior art device, as

discussed above, the direction of travel of the primary transport carriage is first perpendicular to the web travel direction in the web-processing machine, as the primary transport carriage is moved onto the third transport carriage 41. Next, the direction is parallel to the web travel direction as the third transport carriage 41 moves along its path. There, the primary transport carriage and the third transport carriage 41 again move perpendicular to the web travel direction. Finally, the primary transport carriage is moved by a fourth transport carriage again in a direction of web travel so that the roll of material eventually arrives at the roll changer.

Claim 89 recites at least one secondary transport carriage that is usable to transport the primary transport carriage to the intermediate storage area and then along the transport route to the roll changer from the intermediate reel storage area. Claim 89 does not recite second, third or fourth transport carriage which each receives the primary transport carriage during its movement from the storage area to the reel changer. Each one of these second, third and fourth transport carriages, as described in the prior art Lehrieder reference changes a direction of travel of the primary transport carriage.

Claim 89, as amended, further recites that in at least two of the reel storage spaces which are aligned directly one in front of the other in the longitudinal direction of the web processing machine, the reel storage spaces have a width of twice that of a reel width. In other words, two reels can be placed side by side in these aligned reel storage spaces. In the prior art Lehrieder reference, it is recited that each of the tracks 31, 32, 33, 34, 36, 37 and 38 of the intermediate storage facility 39 can receive three of

the primary transport carriages 16. The resultant intermediate storage facility 39 may be too wide to be usable in typical printing press configurations. The use of a two reel wide storage space width provides sufficient storage capability in the reel storage area without being so wide as to be unusable to fit into a number of press configurations.

The secondary reference to Allemann has been reviewed. It does not provide the teachings of the present invention, as set forth in currently amended, independent claim 89 that are missing from the Lehrieder and Schaede references. While Allemann is directed to a paper roll storage and handling installation, it does not appear to show the structure of the subject invention.

All of the rest of the claims in the subject application, both pending and currently withdrawn, all depend, either directly or indirectly from believed allowable, currently amended, independent claim 89. All of these claims are thus also believed to be allowable.

SUMMARY:

The Substitute Specification has been amended to correct several minor typographical errors, without the addition of any new matter. Fig. 8 of the drawings has been corrected to overcome the issues noted by the Examiner. Several of the claims have been amended to correct indefiniteness issues. Claim 89, the sole independent claim pending in the application, as well as various ones of the dependent claims, have been amended. It is believed that the claims which are now pending in the subject application are patentable over the prior art references cited and relied on, taken either singly or in combination. Allowance of the claims, and passage of the application to issue is respectfully requested.

Respectfully Submitted,

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October 30, 2009
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